Customer No.: 31561
Application No.: 10/604,246
Docket No.: 10038-US-PA

IN THE CLAIMS

Please amend the claims as follows.

Claims 1-7 (canceled).

8. (currently amended) A rapid thermal annealing ("RTA") process ~~for~~ of a first RTA equipment, wherein the first RTA equipment has a pyrometer ~~providing~~ for measuring a temperature of the RTA process, the RTA process comprising the following steps:

loading a wafer into a reaction chamber of the first rapid thermal annealing ("RTA") equipment;

proceeding a hold temperature step to maintain the reaction chamber at a first temperature;

proceeding a first ramp up step to ramp up the first temperature to a second temperature of the reaction chamber;

proceeding a stable temperature step to maintain the reaction chamber at the second temperature;

proceeding a second ramp up step to ramp up the second temperature to a main process temperature of the reaction chamber;

processing a first RTA step ~~to the wafer~~ by maintaining the reaction chamber at the main process temperature;

comparing a measured value of an operation parameter with a preset corresponding reference range of value of a normal RTA process ~~the operation parameter~~; and

proceeding a second RTA step ~~to the wafer~~ by maintaining the reaction chamber at the main process temperature when the measured value of the operation parameter is within ~~between~~ the corresponding reference range of value of the normal RTA process ~~operation parameter~~, wherein when the measured value of the operation parameter exceeds the preset corresponding reference range of value of the normal RTA process, the first RTA step is terminated without proceeding with the second RTA step; and

proceeding a cool down step to cool down the main process temperature to the first temperature of the reaction chamber.

Claim 9 (canceled).

10. (currently amended) The RTA process of claim 9, ~~wherein~~ further comprising transferring the wafer from the first RTA equipment into a second RTA equipment ~~for the RTA process comprises, wherein unloading the wafer from the first RTA equipment and loading the wafer into the second RTA equipment after the first RTA equipment is turned off comprise, in order~~ when the measured value of the operation parameter is out of range of the preset corresponding reference range of value of the normal RTA process to complete the RTA process of the wafer.

11. (currently amended) The RTA process of claim 8, wherein the operation parameter comprises a temperature, which is measured by the pyrometer.

12. (original) The RTA process of claim 8, wherein the operation parameter comprises a power provided by the first RTA equipment.

13. (currently amended) The RTA process of claim 8, wherein further comprises an operation time of the first RTA step ~~and~~ is shorter than an operation time of the second RTA step~~, wherein the operation time of the first RTA step is less than the operation time of the second RTA step~~.

14. (currently amended) The RTA process of claim 8, wherein ~~further comprises~~ an operation temperature of the first RTA step and an operation temperature of the second RTA step are same~~, wherein the operation temperature of the first RTA step is equal to the operation temperature of the second RTA step~~.

15. (new) A rapid thermal annealing (RTA) process suitable for annealing a wafer in a RTA equipment comprising:

loading a wafer into a chamber of a RTA equipment;

subjecting the wafer to a RTA process at a process temperature within the chamber; and

comparing whether or not a measured value of an operation parameter is within a preset corresponding reference value range of a normal RTA process, wherein when the measured value is out of range of the preset corresponding reference value range of the normal RTA process, the RTA process is terminated and the wafer is transferred from the first RTA equipment to another RTA equipment to complete the RTA process.

16. (new) The RTA process of claim 15, wherein the operation parameter is a temperature.

17. (new) The RTA process of claim 16, wherein the temperature is measured by a pyrometer installed in the RTA equipment.

18. (new) The RTA process of claim 15, wherein the operation parameter is a power.

19. (new) The RTA process of claim 18, wherein the power is provided by the RTA equipment.